

FURTHER NOTES ON HUMAN SUFFERING  
CAUSED BY MITES, *PEDICULOIDES*  
*VENTRICOSUS* NEWP.

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In an earlier article (Jour. Econ. Ent., Vol. 13, No. 3, p. 322) the writer described the effects of injuries which he received from the bites of the mites *Pediculoides ventricosus* Newp. while handling weevily beans and cowpeas. As he was handling these mite-infested seeds daily, it was impossible to determine how soon the characteristic dermatitis appeared after the bite had occurred, but he was of the opinion that the burning sensation began within a very short time. On a number of occasions the writer and co-workers have had minor attacks from these mites, but, owing to the nature of the work, they have usually been uncertain as to the time elapsing before discomfort became noticeable or before the appearance of reddened spots. They thought that discomfort came within a few minutes, and that the spots always appeared in less than twenty-four hours. They noticed a difference in susceptibility to the injury. On one occasion, when three persons were similarly exposed to the attack of mites, one who had red hair and a ruddy complexion was injured much worse than either of the others, while the writer showed very much less injury than the others.

In describing the effects of applications of these mites to various parts of the body, Dr. H. E. Ewing (Can. Ent., Vol. 54, No. 5, p. 108) says: "The appearance of reddened spots, each with a small papule in the center, was noted the day following application. These spots usually did not develop into wheals, but did itch considerably."

Since reading the above statements, the writer and co-workers, to their sorrow, have had another opportunity to get first-hand information. On Monday, September 15, a laborer, James Petersen, began sorting beans in the laboratory on a specially prepared table. He used as a stopper at the lower end of the table a small sample bag containing about one and one-half pounds of beans, to prevent the beans on the table

from rolling off while they were being examined. Some time during the day he substituted a larger bag filled with weevily cowpeas. Tuesday morning he said he had an "awful dose of hives" all over his arms and body. The peculiar thing about these hives was that none were located on his legs. After an examination I told him that his hives looked like mite bites. There were no mites in the beans he was examining, and I knew of no mites in the laboratory, but if mites had been crawling onto him from beans stored near by, they would have attacked his legs as well as his body. He was left alone on Tuesday, as he had been on Monday.

Wednesday morning, when I received word that he was unable to return to work, I began the work where he had left off, but as soon as I picked up the bag he had been using at the lower end of the table, I knew why he was not at work. This bag was filled with weevily cowpeas, which were badly infested with mites. He had used the bag, not only to keep the beans from rolling off the lower end of the table, but he had used it to wipe the dust off the table after removing each small lot of beans. The mites from the bag had thus been spread all over the table and had crawled onto his arms and body. His legs were not in contact with the table, and were uninjured.

After removing the bag of mite-infested cowpeas and making what I thought was a thorough cleaning of the table and surroundings, I went to see Mr. Petersen. His body and arms were a solid red blotch "burning like fire." He had first noticed this burning on Monday afternoon. It caused much discomfort during that night, but the addition of more mites on Tuesday made it almost unbearable. The external burning was supplemented by turns of fever followed by a cold sweat, making sleep impossible. As the writer, on previous occasions, had obtained relief by bathing in warm soapy water and then applying talcum powder, this treatment was recommended and immediately gave temporary relief. During the night he obtained little sleep between the several necessary applications of talcum powder. He was back at work Thursday morning.

On Wednesday morning I went over the table with a kerosene-soaked cloth to remove all mites after I had burned the mite-infested bag of cowpeas. During the afternoon the writer

and a co-laborer, Mr. C. K. Fisher, sorted beans on the table. In a short time Mr. Fisher was scratching where mites had bitten his arms and body, and before evening wheals had appeared. The writer, having an equal opportunity during the afternoon to become infested with mites which had remained in the cracks of the table, and a better opportunity to become infested in the forenoon while removing the infested bag of cowpeas and cleaning the table, first became aware of their ill-effects when he awoke at 5 a. m. on Thursday morning, scratching a few burning wheals on his body and arms. Mr. Fisher had not been in the laboratory since 7:30 a. m. the previous Saturday, consequently the bites caused wheals to appear on his body in less than three hours.

The table was again gone over with kerosene on Thursday morning and work was resumed, with no new attack of mites. At the end of a week the marks were plainly visible on the arms of Mr. Petersen and Mr. Fisher.

In this instance, as in the one cited above, not only was the writer injured much less than the other men, but a longer time elapsed before the injuries became visible, and their disappearance was more rapid. This indicates that different individuals may not react similarly either in the severity of the injury or the length of time required for the wheals and pustules to appear. It may suggest a tendency toward an acquired immunity to the effects normally produced by the first attack of the mites.

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#### WHERE TO FIND *ZACOTUS MATTHEWSI* Lec.

This brilliant purplish copper-colored carabid ranges from British Columbia to northern California and in the north as far east as the Bitter Root Mountains of Montana. It prefers damp situations, and in the humid lowlands is to be found in the woods under cover not far from streams or springs. It is here of a very brilliant copper color and rather hard to find because of the immense amount of cover. On the high Cascades, however, and the mountains of Idaho as well, as I am told by Mr. Merton C. Lane, it is to be found far more frequently. Here, close to timber line, where there is but little litter and the old logs rest upon hard ground, they are readily observed once the logs are turned over. The more alpine forms are also less robust, narrower, and less brilliant.—Edwin C. Van Dyke.